REMARKS

Reconsideration of the above-referenced application is respectively requested in view of the above amendments and these remarks. Claims 1-2, 8, 12, 14, 16-19, 22, 27-33, 36, 41-43, 46 and 51 are currently pending.

The Specification continues to be objected to because it references a Clos network as a two stage/tier network. Applicants repeat the arguments presented in previous papers filed for this application, and those arguments are incorporated here. The Examiner has requested that evidence be supplied that indicates that a Clos network can be a two stage/tier network. Applicants point to John Kim, William J. Daly and Dennis Abts, *Adaptive Routing in High-Radix Clos Networks*, IEEE, November 2006, http://cva.stanford.edu/publications/2006/SC_adaptive.pdf, page 2, for the concept that an input stage of a Clos network can serve as an output stage. Kim states "A Clos network is a multi-stage non-blocking network with an odd number of stages. The network is network, is equivalent to two back-to-back *butterfly* networks—where the last stage of the input network is fused with the first sage of the output network. . . . Because of packing constraints, **a Clos network can be folded so that the input network and the output network share switch nodules**. A folded-Clos network is sometimes called a fat tree. The corresponding folded-Clos network of the Clos network shown in Figure 1(a) is shown in Figure 1(b)." Kim, page 2 (bold emphasis added.) Kim shows a five stage Clos network in Figure 1(a) folded into a three stage Clos network in Figure 1(b). As described in the current application a three stage Clos network is folded into a two-stage network.

In addition, Applicants point to A. Strey, Communications Terminology, Universtät Innsbruk, WS 2006/2007 http://informatik.uibk.ac.at/teaching/ws2006/fct/slides/fctnetworka.pdf, page 5-14. In this reference Strey discusses how a three stage Clos network can be folded. Strey uses the term two-sided network for this folded network. In the figure on page 5-14, a switch is shown with two switches.

It is also a common known principle of patent law, that Applicants are free to be their own lexicographer. As stated in MPEP § 608.01(g), "An applicant is ordinarily

permitted to use his or her own terminology, as long as it is understood." Applicants respectfully submit that to one of ordinary skill of the art understands Applicants' use of the term two stage/tier Clos network is readily understood as a form of a Clos network in view of the full description of the Clos network in the application, the use of bi-directional links and ports in the stages of the network, the description of folded Clos networks as provided by Kim and Strey and Applicants ample explanations of the two stage Clos network in the correspondence with the Examiner. This form of a Clos network uses all the concepts of a traditional three stage Clos network, and is in fact a three stage network, that use only two stages of actual switches. As a three stage switch, Applicants' Clos network has an input stage, a middle stage and an output stage. Applicants' adaptation of the traditional switch is to have the input stage and the output stage use the same physical stages where there are bi-directional ports and links between the switches.

In the Response to Argument section of the November 30, 2007 Final Office Action, it is stated that switching telephone calls has always been bi-directional. Applicants do not contest that bi-directional connections were known by Clos and maybe even used by him. Nonetheless, the representation of Clos networks by Clos, Zola and others indicates that the input stage is connected to the center stage and that the center stage is connected to the output stage. Thus, a connection from a node connected to the input stage to a node connected to output stage moves uni-directionally from the input stage switch through the center stage switch to the output stage switch. In the network described by Clos, Zola and others, the descriptions refer to the moving from the left side of the Clos network to the right side of the Clos network. Applicants admit that data can move through the switch from the right side of the Clos network to the left side of the network and are thus bi-directional. But this does not contradict the principle that a node connected to the input stage switch can serve as an output node.

If it is accepted that a node connected to the first stage of the Clos network can serve as both an input node and an output node, then the first switch must serve as both the input stage switch and the output stage switch while the center stage switch remains just a center stage switch. After reviewing the previous arguments, Applicants note that the Examiner has not contested that an input node can also serve as an output node. By

stating that Clos' actual Clos network is bi-directional, it is admitted that a node connected to the first stage switch can also both an input node and an output node. From there it readily understood that the signal node, which is operating as an input node and an output node, connects to a single stage of the Clos network such that the stage is both the input stage and output stage of the network. In a Clos network the input stage switch and the output stage switch are connected to a center stage switch. For the first switch to serve as both the input and output stage switches the links and ports between the first stage switch and the second stage switch are bi-directional, which means that data can flow in both directions between the first and center stage switches. This combination of features creates the two stage/tier switch referred to by Applicants.

Having the first stage of the Clos network serve as both the input stage switch and the output stage switch provides advantages for the present invention. The advantage is that one side of the center stage switch connects to both the input stage switch and the output stage switch and allows the other side of the center stage switch to connect to something other than the output stage switch of the Clos network. In the context of the present invention, the second side of the center stage switch connects to the bi-delta network. In this way, the Clos network can be connected to the bi-delta network, and the Clos network can serve as an input to the bi-delta network. The connection from the Clos network to the bi-delta network is the same connection as an input node being connected to the input stage switch of the network or of the output stage switch being connected to a center stage switch. Moreover, the bi-directional links and ports allows the bi-delta network to connect to the mesh network. In other words, the bi-delta network operates as a switch between a Clos network and a mesh network.

In view of the foregoing and in view of Applicants previously presented arguments, Applicants respectfully submit that a two stage/tier Clos network can be easily understood by one of ordinary skill in the art. Applicants request that this objection be withdrawn.

Claims 1, 2, 8, 12, 14, 16-19, 22, 27-33, 36, 41-43, 46 and -51 are rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. Claim 1 is rejected because it is unclear as to how left end-node devices can communicate with one another. Applicants have provided extensive explanations in

previous Responses filed with respect to these cases, and those arguments are repeated and incorporated here. As shown through Kim and Strey, it is understood how a Clos network can be folded so that an input stage switch and an output stage switch can be the actual same physical switch yet have two different names. This permits the three stage Clos network to operate with only two stages of switches, which is given the name by Applicants as a two stage/tier Clos network. In addition, it is explained above how the statement that Clos understood that a network can be bi-directional implies that the input stage switch can operate as an output stage switch. If it can be accepted that the first stage switch of a Clos network can serve as an input stage switch and an output stage switch, then the nodes that are connected to it operate as an input stage node and an output stage node and input stage node communicate with output stage nodes over the Clos network. If the Clos network is on the left side the network configuration claimed by Applicants, a first left end node serving as an input node connected to the first stage switch, i.e input stage switch, communicates over a Clos network with a second left end node serving as an output node connected to the first stage switch, i.e. output stage switch.

In addition, Applicants point to Figure 2, which can be considered a Clos network. See page 6, lines 9-15. As seen in the Figure, a connection is made between end node port 232 through link 213, to link 211, which is through a right side switch, e.g. a center stage switch of a Clos network, to link 215 to end node port 233. Thus, it is respectfully submitted that Applicants have enabled how a left end node can communicate with another left end node.

Based on the explanations provided previously and given above as well as the reference to the Specification, Applicants respectfully submit that the claimed language of bi-directionally coupling left side switches to right side switches permits left end-node devices to communication with each other. Applicants therefore respectfully submit that claims are enabled, i.e. by bi-directionally coupling. Applicants request that this rejection be withdrawn.

Claims 16, 30 and 43 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicants have explained how to couple a Clos network, to a bi-delta network and a bi-delta network to a mesh networks

in previous responses, and those arguments are repeated and incorporated here. Applicants again point to Figure 6 to illustrate how this claimed configuration is enabled. As stated, "In the Anafa-II switch, three adjacent 4X speed ports can be aggregated into a 12X speed port to achieve a 12X link when desired. **In the embodiment shown in FIG.6, cross-coupled bi-delta network 601 uses a fully non-blocking mesh network for traffic among the plurality of right side switches 604, a rearrangeably non-blocking Clos network for the left-side traffic and a bi-delta network for side-to-side traffic. Other arrangements of the Anafa-II switch can be made and be within the scope of the invention.**" Page 11, lines 4-9 (bold emphasis added.) In addition, Applicants describe in connection with Figure 6 "On each of the plurality of right side switches 604, three 4x ports can be used as right side switch end-node ports 616 to couple to three right end-node devices (not shown for clarity.) Twelve 4x ports are used to connect to each of the plurality of left side switches 602 as described above. The remaining nine ports can be used as right side switch interlink ports 620 to connect to other right side switches via second plurality of bi-directional links 612 and create a fully non-blocking mesh among plurality of right side switches 604." Page 11, lines 20-26. As seen Figure 6 provides an illustration and a description of the claimed configuration.

In the Response to Argument section, it is stated that none of the Figures provide support. Applicants note that in the Specification it is stated that certain portions and connections of the configuration are not shown for simplicity in a specific Figure. Nonetheless, those connections are shown in another Figure. For example, the Clos network 222 is shown in Figures 2 and 6, the bi-delta network 101, 221, 601 is shown in Figures 1-6 and the mesh network 323, 324, 400, 426, 528 is shown in Figures 1, and 3-6. The combination of these Figures provides sufficient information for one of ordinary skill in the art to understand the connections between the various networks and the present invention.

In view of the foregoing, it is respectfully submitted that the specification and claims provide adequate disclosure to enable the claims. Applicants therefore request that this rejection under Section 112, first paragraph be withdrawn.

Claims 1, 2, 8, 12, 16-19, 22, 27-33, 36, 41-43, 46 and 51 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particular point out and

distinctly claim the subject matter that Applicants regard as the invention. Claims 1, 15, 16, 30 and 43 are rejected because it is not understood what the nature of the Clos network is. Applicants have fully explained the Clos network above, and those statements are repeated here. Applicants respectfully submit that based on this description and as understood by one of ordinary skill in the art in view of the Specification a Clos network is definite and distinctly claim.

Claims 1, 16, 30, and 43 are rejected because it is unclear how a Clos network and a bi-delta network and a mesh network can be coupled together. As previously stated, the bi-directional input ports of the bi-delta network's input stage are connected to the bi-directional output ports of the center state of the Clos network and the bi-directional output ports of the bi-delta network's output stage are connected to the mesh network. This is fully described above as well as in the Specification. Thus, Applicants respectfully submit that the rejected claims are definite and particular point and out and distinctly claim the subject matter of the invention.

In view of the foregoing, Applicants respectfully submit that the claims are in the correct format. Applicants therefore request that the rejections under Section 112, second paragraph be withdrawn.

As the Applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the Applicants contend that this Amendment, with the above discussion, overcomes the Examiner's objections to and rejections of the pending claims. Therefore, the Applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the matter.

Please charge any fees associated herewith, including extension of time fees, to **50-2117**.

Respectfully submitted,
Wise, Jeffrey L., et al.

SEND CORRESPONDENCE TO:

Motorola, Inc.
Law Department

Customer Number: **22917**

By: /Simon B. Anolick/

Simon B. Anolick
Attorney for Applicant
Registration No.: 37,585
Telephone: 847-576-4234
Fax: 847-576-3750